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ABSTRACT

This paper explores the relation between the communicative and categorical functions of language and the acquisition of language production. Three major factors in language acquisition are communication, ability for representation and the process of categorization. This paper offers evidence that a sudden and dramatic increase in lexical skill results from a developmental merging of communicative, representational and categorizational abilities. Observations were drawn from a longitudinal investigation of language development in two male children, collected from parental notes and audiotaped and videotaped free play sessions. In the first step in development, the children used words as proper nouns, as labels for stable and important persons or objects in their environment. The utterances were specific and noncategorical, and lacked intercommunicative function. Needs and desires were indicated by nonword sounds. As development progressed, new words were acquired and language expanded in function and content. Lexical items began to signal categories of objects and actions and serve intercommunicative purposes. In a third stage words developed intercommunicative and semantic function, followed by dramatic increases in vocabulary. Not until the communicative and noncommunicative functions are joined will rapid linguistic growth occur. (CHK)

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The Merging of the Communicative and Categorical Functions of Lanugage

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Understanding of child language involves not only knowledge of stages and sequences of linguistic development, but also a knowledge of the underlying processes involved in acquisition. Recent research has emphasized the role of cognitive process (Morehead & Morehead, 1974; Slobin, 1973; Bever, 1970) and socialization (Cherry, 1968; Beckwith, 1971; Bronson; 1974) as significant underlying processes in the acquisition of communicative language. Further, it has been shown that communicative skills arise from the socialization process (Cherry, 1968) while the non-communicative functions of language arise from cognitive origins (Piaget, 1955). It is the intent of this paper to explore the relation between these factors which underlie language and the acquisition of language production itself.

There are three major factors which must be considered as significant inputs into the language acquisition process. It is through the first, communication, that the child can reveal attitudinal factors and influence others. McNeill (1970), referring to these two aspects of communication as the expressive and conative modes, asserts that prelinguistic vocalizations and gesture are the earliest ways that these functions are served. Later these same functions must be applied to emerging linguistic abilities. Thus, although the origin of communication is non-linguistic, language soon comes to serve communicative purposes.

The second factor in the acquisition of language concerns the ability for representation. Piagetian notions concerning the origin of language as an intellectual product and later intellectual tool, focus on language as one type of representation which emerges in the sensory-motor period of development

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along with deferred imitation, imagery and symbolic play (Sinclair 1969; 1973). Thus, the ability to acquire and use language stems, at least partly, from prior cognitive organization.

The third factor involved in the acquisition of language is the perceptual-cognitive process of categorization. Brown (1958) has noted that words do not represent objects or events directly but instead represent categories of objects and events. According to Bruner, Goodnow and Austin (1956) these categorizational abilities begin in the Pre-verbal stage and appear to be predominently non-representational.

Thus, each of these three functions: communication, representation and categorization appear to have separate origins in development. Vygotsky's theories (1962) are clearly in line with this since he asserts first, that there is an independence of intellectual ability from speech sound production and that prelinguistic development and the earliest stages of linguistic development reflect predominantly emotional behaviors with social-emotional origins. While representation and categorization have apparently separate origins and serve as underpinnings for language, there must be a merging of these sources for language to occur. In fact, Vygotsky noted that when speech does begin to serve intellect, there is a sudden and rapid increase in vocabulary. Both Lenneberg (1967) and Stern (1971) have referred to this dramatic vocabulary increase however, these references are descriptive with little explanatory evidence. The purpose of this paper is to offer evidence to support the contention that the previously described sudden and dramatic increase in lexical skill results from a developmental merging of communicative, representational and categorizational abilities.

The Study

The observations reported in this paper were drawn from data obtained in a longitudinal investigation of language development in two male children. The data were collected via parental diary notes, biweekly audiotaped and

bimonthly videotaped naturalistic free play sessions with this examiner. The collection of data began at approximately six months of age for each of the children however, the time span reported on here encompassed only the single word utterance period of development for both children.

These two children have continued to display normal developmental patterns although the ages at which they have met developmental milestones for language have been several months later than reported averages. For example, Dale (1972) notes that the average age for the emergence of the first word is one year and that syntactic constructions emerge at 18 months. For both of the children reported on, however, single word utterances did not emerge until 15 months and 14 months for Michael and Nathaniel respectively while syntactic utterances did not become productive until shortly before both children's second birthday. As a result of this slowed down progression of development, each child spent longer at each developmental period thus allowing for greater depth of observation.

The Developmental Sequence

Words as Proper Nouns. The observations which I am reporting on today revealed a patterned consistancy of language emergence in the two children indicating definable stages within the single word utterance period. At the emergence of productive language, the earliest identifiable words which had a phonetic approximation to adult forms, were employed by both children as labels for stable, important people and objects in their environments. In both cases, these words labeled such people and objects as parents, the child's nurse, the bottle and favored objects. Also, in each case the label was not generalized to form a category or class but instead was applied to only one specific object or person. For example, at this point in development Nathaniel had three words of this type which had a stable phonetic form, occurred in consistant environmental contexts and were employed with regularity in those contexts. They were /mama/, /daedi/ and /aisi/ used as a name for his nurse whom the family called Ricie. Michael's first words were also of this type. They were /mama/, /dida//for his father, /baba/ for his bottle

and /tidi/ for a favored stuffed bear. These earliest first utterances were non-categorical since they labeled specific objects or people rather than categories or classes. Although the children's non-linguistic behavior indicated that they were capable of categorizing[1], their first attempts at linguistic productions were more like proper nouns than any other word class. This Proper Noun Strategy (PNS)[2] which both children first employed in their approach to linguistic production, indicates the lack of coordination of developing categorizational abilities and emerging linguistic function.

These early developing non-categorical PNS words also evidenced a lack of inter-communicative function since neither of the children employed any of their PNS words to manipulate their environment. Instead, both children communicated their needs and desires in more primitive ways including pointing, pushing and grabbing. For example, although Nathaniel consistently employed both /mama/ and /daedi/ neither of these forms were employed in a vocative sense when he awoke. Instead, Nathaniel cried. This was true although 'word-like' PNS forms that could have served this communicative function were available to him.

Occasionally pointing was employed as a communicative tool and in these cases the pointing was often accompanied by the use of a stable, vocalized production used as an indicator. Thus, Michael used/ʌh/ in situations of demand to accompany his pointing toward the desired object. Nathaniel employed /dis/ in the same way. These indicative vocalizations were consistently employed for several days to several weeks before being dropped from use and being replaced by another form.

Thus, in this earliest phase of the single word utterance period of development, there were two distinct quasi-linguistic forms employed by both children. The first, PNS words, were non-categorical and non-communicative although they were potentially representational. Since these words were tied to specific environmental referents they could be employed to mentally represent although there was no evidence at this point that the words were used in the absence of the environmental referent and had taken on full representational function. The second

group, indicative vocalizations, were even less word like. They served communicative functions but were neither phonetic approximations of adult words nor were they potentially representational. Their non-representational nature is signaled by the fact that these indicative vocalizations were applied to any object or person when conative or expressive ends were intended. Also, the lack of stability which they evidenced seems to argue against their use as mentally representational forms. Instead, these indicative forms appeared to be consistent sound sequences employed by the child to assist him in acting upon his environment.

The Expanded Function and Nature of Words. As development progressed new words were added to each child's vocabulary and language now evidenced an expansion of function and of content. Lexical items began to signal categories of objects and actions indicating an expansion of content. Thus, Michael employed the word 'dog' to label all four-legged animals. This was one of the earliest instances in which a word was employed as a label for an organized or classified grouping and indicated overextention or overgeneralization (Clark, 1973). This was the beginning of categorical function tied to emerging linguistic ability. However, these new lexical items were never observed to serve any explicit intercommunicative function at this point in development. Instead, earlier forms of communication such as crying, gestures or pointing accompanied by an indicative word were employed for inter-communicative purposes even when one of these labeled objects or actions was desired or rejected.

The newer categorical lexical items also indicated an expansion of function. Bloom (1973) referring to the emergence of relational terms or function forms as among the earliest types of single word utterances, discusses the child's use of words to signal a variety of functional semantic relations. At this point, indications of non-existence, recurrence, action and prohibition were added to the earlier developed indicative or existence category. Although words now were serving a greater number of semantic functions, they were employed only for intracommunicative purposes. Examples of this included Michael's use of the prohib-

itive 'no' to guide his own actions when approaching objects previously forbidden. Similarly, Nathaniel's word 'down' was employed to label his own downward movement but was never observed to occur as a request or rejection of such action. Inter-communication was still limited to more primitive non-linguistic forms.

An additional observation was noted with regard to the newly emerging lexical items at this stage of development. These words were largely unstable and evidenced what has been called a "high mortality rate" (Bloom, 1973). This means that they were employed for a relatively short period of time before dropping out of use. Morehead and Morehead (1974), in explaining Piaget's views of language and thought, indicate that the high mortality rate at this period of development results from a lack of internalized action schemas. According to Piagetian theory, non-internalized action schemas seen at the initiation of substage V of the sensory-motor period result in words serving private as opposed to social-communicative functions. This can not only be seen as an explanation for the transitory nature of words at this point in development, but also as an explanation for the purely categorical and intra-communicative function which these words served.

Words as Inter-Communicative Tools. The rather small, unstable vocabulary which had developed over the previous months continued to grow but more rapidly with the gradual appearance of inter-communicatively functional utterances paired with an expansion of underlying semantic relations. Now, words expressed a variety of semantic functions including existence, non-existence, rejection, recurrence, and action. And, they were employed intercommunicatively such that words that had previously developed were now employed to force action, to influence others and to make needs known. The earliest evidence of this in Nathaniel's development occurred rather suddenly. One morning, upon awakening, Nathaniel began calling 'mama'. Prior to this he had always cried in the same situation. Thus, a word which had first developed six months before was finally employed to obtain action from others. Shortly thereafter an apparent dramatic increase

in Nathaniel's vocabulary occurred. A similar situation was observed for Michael. In Michael's case, the first observed instance of intercommunicative function linked to language production was signaled by the use of /baba/ for bottle as a request. This was also an early developing PNS word in Michael's repetoire. Following this occurrence a sudden upsurge in lexical growth was apparent. The sudden vocabulary growth, called a naming explosion by Lenneberg (1967) occurred only after inter-communicative function was tied to linguistic skill.

Conclusions

The observations noted concerning the linguistic development of these two children indicate the sequential nature and cumulative merging of linguistic function in the earliest period of language emergence. The changes in the functional bases of lexical items reflects upon the separate origins of each of the functions which language serves in the language user. Considering the possibility of separate lines of development for the communicative and the non-communicative functions of language, indicates that not until each of these functions are joined together with emerging linguistic skill will the result be rapid linguistic growth with a communicative base. It is at this point in development that we can truly speak of the emergence of language.

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